

U.S. Application Serial No. 10/826,170
Response to Restriction Requirement mailed May 16, 2006
Response to Restriction Requirement dated June 19, 2006

Docket No. HDAC-5004-C1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims.

Listing Of Claims

1-6. (Cancelled)

7. (Currently amended) A composition comprising a protein in crystalline form wherein ~~at least a portion of the protein has at least 90% identity with SEQ. ID No. 5~~ the protein consists of SEQ ID NO:5.

8. (Currently amended) ~~A The composition according to claim 7 wherein at least a portion of the protein has at least 95% identity with SEQ. ID No. 5~~ the protein is present in the protein crystal as a trimer.

9. (Cancelled)

10. (Currently amended) ~~A The composition according to claim 7 wherein the protein crystal~~ diffracts X-rays for a determination of structure coordinates to a resolution ~~greater~~ less than 3.0 Angstroms.

11. (Currently amended) ~~A The composition according to claim 7 wherein the protein crystal~~ has a crystal lattice in a P212121 space group.

12. (Currently amended) ~~A The composition according to claim 7 wherein the protein crystal~~ has a crystal lattice having unit cell dimensions, +/- 5%, of $a=92.1\text{\AA}$, $b=97.6\text{\AA}$, $c=138.9\text{\AA}$, and $\alpha=\beta=\gamma=90^\circ$.

13-24. (Cancelled)

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25. (Currently amended) A method ~~for forming a crystal of a protein~~ comprising:
forming a crystallization volume comprising~~[[,]]~~ a precipitant solution and a protein ~~wherein~~
~~at least a portion of the protein has at least 90% identity with SEQ. ID No. 5 that consists of~~
SEQ ID NO:5; and

storing the crystallization volume under conditions suitable for crystal formation of the protein.

26. (Currently amended) A ~~The~~ method according to claim 25 wherein ~~at least a portion of the~~
~~protein has at least 95% identity with SEQ. ID No. 5. the protein crystallizes as a trimer.~~

27. (Cancelled)

28. (Currently amended) A ~~The~~ method according to claim 25 wherein ~~the a protein crystal is~~
produced that diffracts X-rays for a determination of structure coordinates to a resolution ~~greater less~~
than 3.0 Angstroms.

29. (Currently amended) A ~~The~~ method according to claim 25 wherein ~~the a protein crystal is~~
produced that has a crystal lattice in a $P2_12_1$ space group.

30. (Currently amended) A ~~The~~ method according to claim 25 wherein ~~the a protein crystal is~~
produced that has a crystal lattice having unit cell dimensions, +/- 5%, of $a=92.1\text{\AA}$, $b=97.6\text{\AA}$,
 $c=138.9\text{\AA}$, and $\alpha=\beta=\gamma=90^\circ$.

31. (Currently amended) A ~~The~~ method according to claim 25~~[[,]]~~ wherein a protein crystal is
produced, the method further comprising:

diffracting the protein crystal to produce a diffraction pattern; and
solving the structure of the protein from the diffraction pattern.

32-43. (Cancelled)

44. (Currently amended) A composition comprising ~~an isolated a protein consisting of SEQ. ID~~
~~No. 5. SEQ ID NO:5.~~

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45. (Currently amended) A The method according to claim 31, the method further comprising:
of identifying an entity that associates with a protein comprising:

taking structure coordinates from diffraction data obtained from a crystal of a protein that has
at least 90% identity with SEQ. ID No. 5; and

performing rational drug design using the solved structure; and a three-dimensional structure
that is based on the obtained structure coordinates.

identifying an entity that associates with the protein crystal.

46. (Currently amended) A The method according to claim 45 wherein at least a portion of the
protein has at least 95% identity with SEQ. ID No. 5; the protein is present in the protein crystal as a
trimer.

47. (Currently amended) A The method according to claim 45 wherein at least a portion of the
protein has at least 90% identity with SEQ. ID No. 5; the protein crystal has a crystal lattice having
unit cell dimensions, +/- 5%, of a=92.1 Å, b= 97.6 Å, c=138.9 Å, and $\alpha=\beta=\gamma=90^\circ$.

48. (Cancelled)

49. (Currently amended) A The method according to claim 45, the method further comprising
selecting one or more entities based on the rational drug design and contacting the selected entities
with the protein.

50. (Currently amended) A The method according to claim 45, the method further comprising
measuring an activity of the protein when contacted with the one or more entities

51. (Currently amended) A The method according to claim 45, the method further comprising
comparing activity of the protein in a presence of and in the absence of the one or more entities; and
selecting entities where activity of the protein changes depending whether a particular entity is
present.

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52. (Currently amended) A The method according to claim 45, the method further comprising contacting cells expressing the protein with the one or more entities and detecting a change in a phenotype of the cells when a particular entity is present.